

Operating Procedure for SEM

NOTE : If during any of the following procedures, the machine fails to operate as prescribed, notify SEM Supervisor, Grace Lau (x5850), Bldg. 62, Room 139.

DO NOT PUT LOOSE POWDER IN THE SEM CHAMBER!!!

Put sample into the chamber

1. Sign into the logbook.
2. Make sure the S.C./S.E.C. switch is set to S.E.C. on the front panel, then press the AIR switch.
3. When air comes into the specimen exchange chamber, pull out the specimen exchange chamber along the rails.
4. Set the specimen holder and the specimen stub with a specimen.
5. Fix the Stub by tightening the lock screw.
6. Screw the specimen holder into the exchange rod, and return the specimen exchange chamber along the rails to its original position.
7. Press the EVAC switch on the evacuation control panel. When high vacuum is attained, the light will change from red to blue from the computer screen.
8. Turn the airlock lever to O, to open the vacuum shutter.
9. Set the specimen to the specimen stage with the exchanging rod, and then pull out the rod along by turning it counterclockwise.
10. Turn the airlock lever to C, to close the vacuum shutter.
11. When high vacuum is attained, the light will change from red to blue from the computer screen.
12. Choose your desired vacuum and click the ON button on the HV Control dialog.
13. Adjust the X,Y,R, T and Z controls to your desired position and adjust the magnification, X stigmator, Y stigmator, Focus, Contrast and Brightness for your image.

Remove sample from Chamber

1. Click the OFF button on the HV Control dialog to cut off high voltage power supply.
2. Confirm the SPECIMEN STAGE switch is set to FREE.
3. Set the X,Y,R,T,Z controls of the specimen stage to the specimen exchange position indicated on the top of the specimen stage.
4. Turn the AIRLOCK lever (MV1) counterclockwise to O.
5. Insert the exchanging rod until it reaches the threaded portion of the specimen holder, and then turn the rod clockwise to screw it into the holder. After completely screwing it to the holder, pull the rod out to shift the specimen to the specimen exchange chamber.
6. Turn the AIRLOCK lever clockwise to C.
7. Make sure the S.C./S.E.C. switch is set to S.E.C. on the front panel, then press the AIR switch.
8. When air comes into the specimen exchange chamber, pull out the specimen exchange chamber along the rails.
9. Remove the specimen stub from the specimen holder by loosening the screws.
10. Return the specimen exchange chamber along the rails to its original position.
11. Press EVAC switch on the evacuation control panel.
12. Sign into the logbook